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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,375	06/09/2005	Yoko Hanada	262666US0PCT	4697

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EXAMINER	
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ART UNIT	PAPER NUMBER
1615	

NOTIFICATION DATE	DELIVERY MODE
08/05/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/517,375	HANADA ET AL.	
	Examiner	Art Unit	
	Jeffrey T. Palenik	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) *2,4-8,10,12,14 and 15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,9,11,13 and 16-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

STATUS OF THE APPLICATION

Receipt is acknowledged of Applicants' Request for Continued Examination (RCE), Amendments and Remarks, filed 8 April 2010, in the matter of Application N° 10/517,375. The Examiner further acknowledges the following:

Claims 1-18 are pending where claims 2, 4-8, 10, 12, 14 and 15 remain withdrawn from consideration.

No claims have been cancelled.

Claims 1, 16 and 17 have been amended. Claim 18 is newly added. The amendment to claim 1 adds component "C" which includes in addition to components "A" and "B", at least one acid selected from such acids as lactic and/or malic acid. Support for the amendment is provided.

The amendment to claim 16 simply corrects a typographical error. The amendment to claim 17 is to depend from claim 13 instead of claim 1.

No new matter has been added.

Thus, claims 1, 3, 9, 11, 13 and 16-18 now represent all claims currently under consideration.

INFORMATION DISCLOSURE STATEMENT

No new Information Disclosure Statement (IDS) have been submitted for consideration.

WITHDRAWN OBJECTIONS/REJECTIONS

Claim Objections

Applicants' amendment to claim 17 is sufficient to overcome the objection previously raised.

Rejections under 35 USC 112

Applicants' amendment to claims 17 is sufficient in overcoming the lack of antecedent basis rejection made to said claim under the second paragraph of 35 USC §112.

Rejection under 35 USC §103

Applicants' amendment to claim 1 as discussed above is sufficient in overcoming the obviousness rejection made to claims 1, 3, 9, 11 and 13 under 35 USC §103(a) as being unpatentable over the combined teachings of Kondo et al. and Ando et al. As neither reference teaches any of the acids newly amended into the base claim, the rejection stands **withdrawn**.

Similarly, Applicants' amendment is sufficient in overcoming the rejection made to claim 16 under 35 USC §103(a) as being unpatentable over the combined teachings of Kondo et al., Ando et al. in further view of Martin et al. Again, as none of the references teach any of the acids newly amended into the base claim, the rejection stands **withdrawn**.

NEW REJECTIONS

In light of the aforementioned withdrawn rejections, the amended base claim and addition of new claim 18, the following rejection(s) are presented:

CLAIM REJECTIONS - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

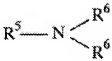
The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

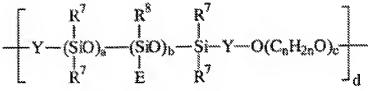
Claims 1, 3, 9, 11, 13, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al. (USPN 6,086,663) and Ando et al. (JP 1997-151119) in further view of Yui et al. (USPN 5,747,016).

The amended independent claim 1 is directed to a hair cosmetic composition comprising components (A), (B) and (C), wherein (A) is an amino-modified organopolysiloxane chain and a polyoxyalkylene chain, (B) is at least one cationic surfactant having a core formula selected from the group consisting of formula (2):



(2)

Component (C) is at least one acid compound (e.g. malic, lactic, glycolic, etc.) which conveys a pH of 3-5 to the hair cosmetic composition. Claim 18 further narrows the acid compound to either lactic or malic acid. Claims 3 and 9 further limit the composition of claim 1 such that component (A) is in the form of a block copolymer of the following core formula (4):



(4)

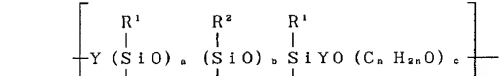
R_7 is recited as being a hydrogen or C_1-C_6 hydrocarbon group. R_8 is recited as being the same as R_7 or E, where E is a reactive functional group represented by -R_9Z-, where R_9 is a C_1-C_{20} divalent hydrocarbon group and Z is a primary or tertiary amino group-containing group or an ammonium group-containing group, where "a" is 2 or greater, "b" is 1 or greater, "c" is 4 or greater, "d" is 2 or greater, "Y" is a divalent organic group bound via a carbon-silicon atom to the adjacent silicon atom via an oxygen atom to the polyoxyalkylene block chain. Claim 11 recites that the ratio of the siloxane block (A) is 25-97% by weight of the whole block copolymer. Claims 13 and 17, in accordance with the elected species, recite stearyl alcohol.

Kondo teaches surface modifier compositions for use in cosmetic compositions such as hair care products (Example 3). Comparative Example 6 is a composition comprising an amino-modified polysiloxane mixed with the cationic surfactant stearyltrimethylammonium chloride and cetyl alcohol. Stearyl alcohol is taught as a functionally equivalent aliphatic alcohol stabilizing compounds (col. 5, lines 29-33).

Kondo does not expressly teach the amino-modified polysiloxane as instantly claimed in claims 3, 9 and 11. Nor does the reference teach the specific acids (e.g. lactic or malic acids) as newly claimed.

Concerning the newly added acid compound limitations of claims 1 and 18, Ando teaches in Examples 10 and 22 (see Tables III and VII, respectively), both of which are directed to shampoo agent formulations, that citric acid (e.g. a polycarboxylic acid) is used specifically for adjusting the pH level of the formula. The reference further expressly teaches the limitations of claims 3 and 9, wherein a hair cosmetic ingredient is characterized by the inclusion of a reactive silicone-type block copolymer expressed by the following general formula:

[Chemical 1]:



Within the formula, R^1 signifies a monovalent hydrocarbon group (e.g. methyl), whereas "X" signifies a reactive functional group expressed by the following formula: $-R^3-Z$. The variable R^3 signifies a direct bond or divalent hydrocarbon group 1-20 carbon atoms in length, whereas "Z" represents a group comprising either an amino or ammonium group. The variable R^2 represents

either R^1 or "X". The variable "n" is an integer having a value of 2-4, "a" is an integer of at least 2, "b" is an integer of at least 1, "c" is an integer of at least 4, "d" is an integer of at least 2, and "Y" represents a divalent organic group coupled, via carbon-silicon, with an adjacent silicon atom and, via an oxygen atom, with a polyoxyalkylene block. The limitations of claim 11 are also taught by Ando in claim 1, such that the siloxane blocks constitute approximately 25-95 wt% of the whole block copolymer. Ando teaches in ¶[0017] that the practiced hair cosmetic ingredient discussed above, maybe further solubilized or dispersed (e.g. combined with) into an alcohol (e.g. cetyl alcohol; see Table IV) or dispersed within water by using a surfactant.

Ando et al. do not expressly teach either of the elected alcohol or cationic surfactant components of the instant invention. Nor are the specific acids (e.g. lactic or malic acids) taught by the reference. Yui et al. expressly cures the latter acid deficiency.

The practiced invention of Yui et al. is directed to organopolysiloxanes and methods of setting hair (e.g. molding or sculpting) using said product (Title; Abstract). The Abstract further teaches that "[h]air which is set by the method retains the given shape over time, and the organopolysiloxane imparts a soft touch to the hair. In addition, the shape given by the setting treatment can be easily restored to the original shape by ordinary shampooing." Examples of the organopolysiloxanes which are employed in the invention (col. 5, line 21 to col. 7 line 32; see also formula (2)) include those which have been modified different reaction types (e.g., amide-forming, tertiary or quaternary ammonium forming, etc.) (col. 7, lines 12-32). A more specific example is taught by Synthesis Example 1, which incorporates a side-chain primary aminopropyl-modified polydimethylsiloxane as the modified organopolysiloxane. Other

additives or ingredients which are expressly taught as being a part of the hair setting formulations include such pH modifiers as lactic acid and citric acid (col. 11, lines 32-41). Acid derivatives of chitin/chitosan are also taught and suggested as being incorporated into the formulation. Acids used to create this component include lactic, glycolic and succinic acids (col. 12, line 62 to col. 13, line 2).

As such, it would have been *prime facie* obvious to a person of ordinary skill at the time the invention was made to have incorporated the amino-modified organopolysiloxane component of Ando into the invention practiced by Kondo, particularly since both inventions are directed to the creation of cosmetic compositions, more specifically hair care products. Given that the intended uses of the amino-modified polysiloxanes compositions in both inventions is directed towards the preparation of hair-care products by mixture with alcohol and surfactants, it follows that the ordinarily skilled artisan would have been highly motivated to substitute the amino-modified organopolysiloxane-polyethylene oxide block copolymer (per Ando) for the amino-modified polysiloxane component taught by Kondo. Thus, since the inventions to Kondo and Ando demonstrate inventive overlap, as discussed above, one of ordinary skill in the art would also have been particularly motivated to prepare the instantly claimed hair cosmetic. Given the guidance provided by Yui et al. the person of ordinary skill in the art would have been similarly motivated to further modify the teachings of Kondo and Ando to incorporate an acid compound such as lactic acid into the composition. The teachings of both Ando and Yui address Applicants' amended limitation wherein the pH of the hair composition is modified through addition of an acid such as, citric or lactic acid.

It would have been *prima facie* obvious to combine the teachings, each of which are taught by the art as being useful for the same purpose, in order to form a final composition, such as that which is instantly claimed, to be used for the very same purpose; the idea of combining them flowing logically from their having been individually taught in the prior art (MPEP §2144.06). *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980)

Thus, based on the combined teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonably high expectation of successfully producing the instantly claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the reference, especially in the absence of evidence to the contrary.

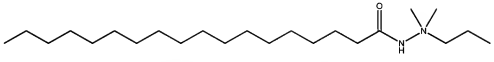
Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Kondo et al., Ando et al. and Yui et al. as set forth above with respect to claim 1, further in combination with Martin et al. (USPN 5,078,990).

The amended limitations of claim 1 are discussed above. Claim 16 recites that the composition of claim 1, namely core formula (2), is specifically embodied by either of the compounds behenyl dimethylamine or stearamide propyldimethylamine.

None of Kondo, Ando or Yui expressly teach using either of these specific compounds. As discussed above, Kondo does teach modifier compounds which align with the broader recitations for core formula (2) of claim 1. However, Kondo does not expressly teach either of the compounds of claim 16.

The teachings of Martin, like Kondo, Ando and Yui, are directed to shampoos and conditioning shampoo compositions (Title). Regarding the conditioning agents which may be incorporated into the practiced shampoo/conditioner formulations, Martin teaches that such components may include both polysiloxane polyether copolymers as well as stearamido propyl dimethylamine (col. 10, line 59 to col. 11, line 15).

It would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to modify the composition taught and suggested by Kondo, Ando and Yui using the teachings of Martin and arrive at the instantly claimed formulation. The ordinarily skilled artisan would have readily recognized the compound stearamido propyl dimethylamine as being a species of tertiary amine as shown below:



Stearamido propyl dimethylamine

Given that the intended uses of the amino-modified polysiloxanes compositions in both inventions is exclusively directed towards the preparation of hair-care products, specifically, those used for softening and conditioning, it follows that the ordinarily skilled artisan would have been highly motivated to modify the tertiary amine compounds taught and suggested by Kondo for the modifier taught by Martin. Thus, since the combined teachings of the references demonstrate inventive overlap, as discussed above, one of ordinary skill in the art would also have been particularly motivated to prepare the instantly claimed hair cosmetic composition. Thus, it would have been *prima facie* obvious to combine the teachings, each of which are taught

by the art as being useful for the same purpose, in order to form a third composition, such as that which is instantly claimed, to be used for the very same purpose; the idea of combining them flowing logically from their having been individually taught in the prior art (MPEP §2144.06). *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980)

From the combined teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the reference, especially in the absence of evidence to the contrary.

RESPONSE TO RESTRICTION REMARKS

Applicants' request for reconsideration of the restriction requirement has been fully reconsidered by the Examiner, but is **not persuasive**. Applicants continue to traverse on the grounds that the special technical feature of the instantly amended invention is the combination of components (A), (B) and (C), which Ando does not teach.

While it is agreed that Applicants' position is correct concerning the teachings of the Ando reference alone, the Examiner respectfully maintains the restriction for the reasons which are newly made of record above. Namely the combined teachings of Kondo, Ando, and Yui, are directed to a block copolymer composition comprising an amino-modified organopolysiloxane chain, a polyalkylene chain which is modified at the variable "X" by the core formula "-R^3-Z-" where "Z" signifies a group inclusive of an amino group, and at least one pH-adjusting acid. As

such, the Examiner maintains that the claims do not relate to a single inventive concept under PCT Rules 13.1 and 13.2.

All claims have been rejected; no claims are allowed.

CORRESPONDENCE

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey T. Palenik whose telephone number is (571) 270-1966. The examiner can normally be reached on 7:30 am - 5:00 pm; M-F (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Wax can be reached on (571) 272-0623. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey T. Palenik/
Examiner, Art Unit 1615

/Robert A. Wax/
Supervisory Patent Examiner, Art Unit 1615